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Read School switch to Pearson Edexcel GCSE Computer Science

School name:	Read School	Region:	Selby, North Yorkshire
Number of pupils:	242	Age range:	4 to 18

We talk to Chris Sharples, Head of Computing, at Read School who explains why he chose to switch to Pearson Edexcel GCSE Computer Science. Chris explains the school's transition journey with links to all the resources and a schedule to help others make their own transition as easy and as effective as possible. Find out why he and the students are so pleased that they made the switch.

Background

When I started as Head of Computing just over two years ago, I inherited the AQA Computer Science GCSE as well as the AQA A-level. I stuck with both during lockdown, but in 2021-22 I had a Year 10 group with some excellent programmers who wanted to progress to university courses in Computing. I had concerns about AQA Paper 1: Computational thinking and programming skills, most fundamentally about it being a written paper for assessing coding.



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We knew moving to Pearson Edexcel was in the best interest of our students

I attended a Debriefing the Exam session run by my local NCCE Hub. Paul Long gave the introduction and offered a detailed mapping of the differences between the content of the GCSE courses. We also heard about the experiences of 15 or so Pearson Edexcel teachers. Every single one was positive about the exam that summer, including the practicalities of carrying out the Paper 2 onscreen assessment.

I reached out to a friend who taught Pearson Edexcel, to ask more questions. I also looked at transfer documents available on the Pearson Edexcel site, especially their own Getting Started Guide. I contacted PG Online and had a very fair costing to move from AQA to Pearson Edexcel resources. Reassured, and convinced it was in the best interests of my students, I contacted my Head Teacher. We agreed to change courses, swapping from AQA to Pearson Edexcel in September. This meant my Year 11s would change course with only nine months left until their exams. When I told the students of the change, and explained the differences in the next two sections, universal cheering broke out and my Year 11s were delighted.

My Y11 students have just completed their second mock paper, a full live exam of the practical 2022 Paper 2 from last year. All my students managed to complete between four and the full six tasks, working strategically to grab as many marks as they could. On average they are more than a grade above target.



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Students develop a better understanding of programming with Pearson Edexcel because the level required is greater

The most important reason for changing exam boards is the Paper 2 on-screen assessment which means that each student works on a computer to attempt to complete six tasks using Python. These six tasks get increasingly harder. They progress from instructions to add code to complete a half-written programme, through rearranging lines of a complete programme, to writing a programme to use a given 2-D array or csv text file. You get the idea! Students can choose which IDE to use as long as it is off-line. We have IDLE and Thonny. The students take each .py file from the student's folder, annotate their code, then save it in the Completed Coding folder.

For students who are good at programming, the greatest frustration is when they have to make changes to other's code when they would prefer to start again and do it their way. I remind them of the advantages that they are using Python, not Pseudocode, and they are coding, not thinking about code and syntax without being able to try out their code. Lower ability students benefit from the IDE at least showing them syntax and logical errors so they can show their skills of getting a programme working rather than their knowledge of syntax. GCSE Computer Science theory questions for these students is often more a test of their English comprehension, so it is good that they can at least have some 'help' in the programming.

I would think that we all teach parallel programming and theory through Years 10 and 11 and in this course, this involves Unit 1 computational thinking and Unit 6 programming and I find that I mix the two pretty thoroughly through the two years. The students love the concept of the Programming Language Subset (PLS), as it neatly defines what they need to know. As one of our Year 11 students said,

“The good thing about Pearson Edexcel is the PLS as the skill is assessing how to put code together [with trial and error]. AQA [and other Boards] assesses you on how much you know [without testing] which is unrealistic”.

I find the level of programming required is probably greater with Pearson Edexcel. For example, I found I needed to teach about python turtle, python searches, and file input and output. I really like that these are in the curriculum as they both have an important place in developing a better understanding of programming. The Pearson Edexcel programming resources are excellent and are in the style of the questions that are asked in the actual exam. The more the students practise with this structure and going backwards and forwards from the PLS, the better.

The structure of the Pearson Edexcel qualification is straightforward, and the content makes more sense

There is considerably less theory with Pearson Edexcel than AQA. This is verifiable through using Paul Long's useful comparison spreadsheet and I made a list of the differences which I made sure that I covered before the first Mock Theory. This reduction in content was another reason for my students cheering. They were happy to learn that they did not need RLE and Huffman diagrams and the SQL unit was no longer needed. There are some bits added into Pearson Edexcel – for example – kibibytes, gibibytes which I think makes for better understanding.

The Pearson Edexcel structure is also considerably more straightforward to plan and to teach and therefore for the students to understand. There are five theory units, or fundamental principles and concepts as described in the syllabus. Although I may change this in the future, these naturally fit in to the five half terms in Year 10 and 11. I also like the simplicity of the structure of the content. This simpler approach for Pearson Edexcel is illustrated by Paul Long.

“...did you know that for GCSE Computer Science, AQA use 28 different command words, OCR use 30 different command words and Pearson Edexcel use 15 different command words”.



[Find out more about switching to Pearson Edexcel GCSE Computer Science](#)